RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/590, 958_

Source: _IF‌WO_

Date Processed by STIC: _09/05/2006_

ENTERED

RAW SEQUENCE LISTING   DATE: 09/05/2006
PATENT APPLICATION: US/10/590,958   TIME: 15:09:03

Input Set : A:\Sequence Listing-13987-00019-US.txt
Output Set: N:\CRF4\09052006\J590958.raw

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 3 <110> APPLICANT: Cirpus, Petra
 4        Bauer, Jorg
 5        Zank, Thorsten
 6        Heinz, Ernst
 8 <120> TITLE OF INVENTION: METHOD FOR PRODUCING UNSATURATED OMEGA-3-FATTY ACIDS IN
 9        TRANSGENIC ORGANISMS
11 <130> FILE REFERENCE: 13987-00019-US
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/590,958
C--> 13 <141> CURRENT FILING DATE: 2006-08-25
     13 <150> PRIOR APPLICATION NUMBER: PCT/EP2005/001865
14 <151> PRIOR FILING DATE: 2005-02-23
16 <150> PRIOR APPLICATION NUMBER: DE 10 2004 009 458.6
17 <151> PRIOR FILING DATE: 2004-02-27
19 <160> NUMBER OF SEQ ID NOS: 6
21 <170> SOFTWARE: PatentIn version 3.3
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 1086
25 <212> TYPE: DNA
26 <213> ORGANISM: Phytophthora infestans
28 <220> FEATURE:
29 <221> NAME/KEY: CDS
30 <222> LOCATION: (1)..(1086)
31 <223> OTHER INFORMATION: Omega-3-desaturase
33 <400> SEQUENCE: 1
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35 Met Ala Thr Lys Glu Ala Tyr Val Phe Pro Thr Leu Thr Glu Ile Lys
36 1               5                   10                  15
37 cgg tcg cta cct aaa gac tgt ttc gag gct tcg gtg cct ctg tcg ctc        96
38 Arg Ser Leu Pro Lys Asp Cys Phe Glu Ala Ser Val Pro Leu Ser Leu
39             20                  25                  30
40 tac tac acc gtg cgt tgt ctg gtg atc gcg gtg gct cta acc ttc ggt       144
41 Tyr Tyr Thr Val Arg Cys Leu Val Ile Ala Val Ala Leu Thr Phe Gly
42         35                  40                  45
43 ctc aac tac gct cgc gct ctg ccc gag gtc gag agc ttc tgg gct ctg       192
44 Leu Asn Tyr Ala Arg Ala Leu Pro Glu Val Glu Ser Phe Trp Ala Leu
45     50                  55                  60
46 gac gcc gca ctc tgc acg ggc tac atc ttg ctg cag ggc atc gtg ttc       240
47 Asp Ala Ala Leu Cys Thr Gly Tyr Ile Leu Leu Gln Gly Ile Val Phe
48 65                  70                  75                  80
49 tgg ggc ttc ttc acg gtg ggc cac gat gcc ggc cac ggc gcc ttc tcg       288
50 Trp Gly Phe Phe Thr Val Gly His Asp Ala Gly His Gly Ala Phe Ser
51                 85                  90                  95
52 cgc tac cac ctg ctt aac ttc gtg gtg ggc act ttc atg cac tcg ctc       336
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53 Arg Tyr His Leu Leu Asn Phe Val Val Gly Thr Phe Met His Ser Leu
54         100                 105                 110
55 atc ctc acg ccc ttc gag tcg tgg aag ctc acg cac cgt cac cac cac    384
56 Ile Leu Thr Pro Phe Glu Ser Trp Lys Leu Thr His Arg His His His
57         115                 120                 125
58 aag aac acg ggc aac att gac cgt gac gag gtc ttc tac ccg caa cgc    432
59 Lys Asn Thr Gly Asn Ile Asp Arg Asp Glu Val Phe Tyr Pro Gln Arg
60     130                 135                 140
61 aag gcc gac gac cac ccg ctg tct cgc aac ctg att ctg gcg ctc ggg    480
62 Lys Ala Asp Asp His Pro Leu Ser Arg Asn Leu Ile Leu Ala Leu Gly
63 145                 150                 155                 160
64 gca gcg tgg ctc gcc tat ttg gtc gag ggc ttc cct cct cgt aag gtc    528
65 Ala Ala Trp Leu Ala Tyr Leu Val Glu Gly Phe Pro Pro Arg Lys Val
66             165                 170                 175
67 aac cac ttc aac ccg ttc gag cct ctg ttc gtg cgt cag gtg tca gct    576
68 Asn His Phe Asn Pro Phe Glu Pro Leu Phe Val Arg Gln Val Ser Ala
69             180                 185                 190
70 gtg gta atc tct ctt ctc gcc cac ttc ttc gtg gcc gga ctc tcc atc    624
71 Val Val Ile Ser Leu Leu Ala His Phe Phe Val Ala Gly Leu Ser Ile
72             195                 200                 205
73 tat ctg agc ctc cag ctg ggc ctt aag acg atg gca atc tac tac tat    672
74 Tyr Leu Ser Leu Gln Leu Gly Leu Lys Thr Met Ala Ile Tyr Tyr Tyr
75     210                 215                 220
76 gga cct gtt ttt gtg ttc ggc agc atg ctg gtc att acc acc ttc cta    720
77 Gly Pro Val Phe Val Phe Gly Ser Met Leu Val Ile Thr Thr Phe Leu
78 225                 230                 235                 240
79 cac cac aat gat gag gag acc cca tgg tac gcc gac tcg gag tgg acg    768
80 His His Asn Asp Glu Glu Thr Pro Trp Tyr Ala Asp Ser Glu Trp Thr
81             245                 250                 255
82 tac gtc aag ggc aac ctc tcg tcc gtg gac cga tcg tac ggc gcg ctc    816
83 Tyr Val Lys Gly Asn Leu Ser Ser Val Asp Arg Ser Tyr Gly Ala Leu
84             260                 265                 270
85 att gac aac ctg agc cac aac atc ggc acg cac cag atc cac cac ctt    864
86 Ile Asp Asn Leu Ser His Asn Ile Gly Thr His Gln Ile His His Leu
87             275                 280                 285
88 ttc cct atc att ccg cac tac aaa ctc aag aaa gcc act gcg gcc ttc    912
89 Phe Pro Ile Ile Pro His Tyr Lys Leu Lys Lys Ala Thr Ala Ala Phe
90     290                 295                 300
91 cac cag gct ttc cct gag ctc gtg cgc aag agc gac gag cca att atc    960
92 His Gln Ala Phe Pro Glu Leu Val Arg Lys Ser Asp Glu Pro Ile Ile
93 305                 310                 315                 320
94 aag gct ttc ttc cgg gtt gga cgt ctc tac gca aac tac ggc gtt gtg   1008
95 Lys Ala Phe Phe Arg Val Gly Arg Leu Tyr Ala Asn Tyr Gly Val Val
96             325                 330                 335
97 gac cag gag gcg aag ctc ttc acg cta aag gaa gcc aag gcg gcg acc   1056
98 Asp Gln Glu Ala Lys Leu Phe Thr Leu Lys Glu Ala Lys Ala Ala Thr
99             340                 345                 350
100 gag gcg gcg gcc aag acc aag tcc acg taa                          1086
101 Glu Ala Ala Ala Lys Thr Lys Ser Thr
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Input Set : A:\Sequence Listing-13987-00019-US.txt
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102          355                360
104 <210> SEQ ID NO: 2
105 <211> LENGTH: 361
106 <212> TYPE: PRT
107 <213> ORGANISM: Phytophthora infestans
109 <400> SEQUENCE: 2
110 Met Ala Thr Lys Glu Ala Tyr Val Phe Pro Thr Leu Thr Glu Ile Lys
111 1               5                   10                  15
112 Arg Ser Leu Pro Lys Asp Cys Phe Glu Ala Ser Val Pro Leu Ser Leu
113             20                  25                  30
114 Tyr Tyr Thr Val Arg Cys Leu Val Ile Ala Val Ala Leu Thr Phe Gly
115         35                  40                  45
116 Leu Asn Tyr Ala Arg Ala Leu Pro Glu Val Glu Ser Phe Trp Ala Leu
117     50                  55                  60
118 Asp Ala Ala Leu Cys Thr Gly Tyr Ile Leu Leu Gln Gly Ile Val Phe
119 65                  70                  75                  80
120 Trp Gly Phe Phe Thr Val Gly His Asp Ala Gly His Gly Ala Phe Ser
121                 85                  90                  95
122 Arg Tyr His Leu Leu Asn Phe Val Val Gly Thr Phe Met His Ser Leu
123                 100                 105                 110
124 Ile Leu Thr Pro Phe Glu Ser Trp Lys Leu Thr His Arg His His His
125             115                 120                 125
126 Lys Asn Thr Gly Asn Ile Asp Arg Asp Glu Val Phe Tyr Pro Gln Arg
127     130                 135                 140
128 Lys Ala Asp Asp His Pro Leu Ser Arg Asn Leu Ile Leu Ala Leu Gly
129 145                 150                 155                 160
130 Ala Ala Trp Leu Ala Tyr Leu Val Glu Gly Phe Pro Pro Arg Lys Val
131                 165                 170                 175
132 Asn His Phe Asn Pro Phe Glu Pro Leu Phe Val Arg Gln Val Ser Ala
133                 180                 185                 190
134 Val Val Ile Ser Leu Leu Ala His Phe Phe Val Ala Gly Leu Ser Ile
135         195                 200                 205
136 Tyr Leu Ser Leu Gln Leu Gly Leu Lys Thr Met Ala Ile Tyr Tyr Tyr
137     210                 215                 220
138 Gly Pro Val Phe Val Phe Gly Ser Met Leu Val Ile Thr Thr Phe Leu
139 225                 230                 235                 240
140 His His Asn Asp Glu Glu Thr Pro Trp Tyr Ala Asp Ser Glu Trp Thr
141                 245                 250                 255
142 Tyr Val Lys Gly Asn Leu Ser Ser Val Asp Arg Ser Tyr Gly Ala Leu
143             260                 265                 270
144 Ile Asp Asn Leu Ser His Asn Ile Gly Thr His Gln Ile His His Leu
145         275                 280                 285
146 Phe Pro Ile Ile Pro His Tyr Lys Leu Lys Lys Ala Thr Ala Ala Phe
147     290                 295                 300
148 His Gln Ala Phe Pro Glu Leu Val Arg Lys Ser Asp Glu Pro Ile Ile
149 305                 310                 315                 320
150 Lys Ala Phe Phe Arg Val Gly Arg Leu Tyr Ala Asn Tyr Gly Val Val
151                 325                 330                 335
152 Asp Gln Glu Ala Lys Leu Phe Thr Leu Lys Glu Ala Lys Ala Ala Thr
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153   340   345   350
154 Glu Ala Ala Ala Lys Thr Lys Ser Thr
155   355   360
157 <210> SEQ ID NO: 3
158 <211> LENGTH: 25
159 <212> TYPE: DNA
160 <213> ORGANISM: Artificial
162 <220> FEATURE:
163 <223> OTHER INFORMATION: Primer
165 <400> SEQUENCE: 3
166 taagcttaca tggcgacgaa ggagg   25
169 <210> SEQ ID NO: 4
170 <211> LENGTH: 24
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial
174 <220> FEATURE:
175 <223> OTHER INFORMATION: Primer
177 <400> SEQUENCE: 4
178 tggatccact tacgtggact tggt   24
181 <210> SEQ ID NO: 5
182 <211> LENGTH: 24
183 <212> TYPE: DNA
184 <213> ORGANISM: Artificial
186 <220> FEATURE:
187 <223> OTHER INFORMATION: Primer
189 <400> SEQUENCE: 5
190 ctggttcagg tgcattcgcc ggcg   24
192 <210> SEQ ID NO: 6
193 <211> LENGTH: 24
194 <212> TYPE: DNA
195 <213> ORGANISM: Artificial
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Primer
200 <400> SEQUENCE: 6
201 gcggccgcat ggcgacgaag gagg   24

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 09/05/2006
PATENT APPLICATION: **US/10/590,958**   TIME: 15:09:04

Input Set : **A:\Sequence Listing-13987-00019-US.txt**
Output Set: **N:\CRF4\09052006\J590958.raw**

<u>**Invalid <213> Response:**</u>
**Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.**

Seq#:3,4,5,6

VERIFICATION SUMMARY   DATE: 09/05/2006
PATENT APPLICATION: **US/10/590,958**   TIME: 15:09:04

Input Set : **A:\Sequence Listing-13987-00019-US.txt**
Output Set: **N:\CRF4\09052006\J590958.raw**

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date